

Appl. No. 10/779,962
Amendment dated 07/27/2006
Reply to Office Action of 03/28/2006

Remarks

Claims 1-15 remain in the application.

Claims 1 and 15 have been amended in the present response.

Claim Objections

Claims 1 and 15 were objected to for formalities, as detailed in item 2 in the 3-28-2006 office action.

Applicant has amended claims 1 and 15, as suggested by the Examiner, to correct these informalities accordingly.

Double Patenting

Claims 16-21 were rejected under the judicially created doctrine of double patenting over claims 1-19 of US Patent No 6,737,473 (item 4 in the 3/28/2006 office action).

Applicant has canceled claims 16-21.

Claim Rejections – 35 U.S.C. 103

Claims 1-4, 9-16 and 20-21 were rejected under 35 U.S.C. 103(a) as being unpatentable over Hiroshi et al (JP 10-36575) in view of Gee et al. (EP 463,431) or Nothnagel (US5,356,988) (item 7, page 5 of the 3/28/2006 office action).

Claim 5 was rejected as being unpatentable over Hiroshi et al (JP 10-36575) in view of Gee et al. (EP 463,431) and further in view of Chung et al. (US 5,543,484) (item 10, page 6 of the 3/28/2006 office action).

Claims 6-8 and 17-19 were rejected as being unpatentable over Hiroshi et al (JP 10-36575) in view of Gee et al. (EP 463,431) or Nothnagel (US5,356,988) and further in view of Joffe et al (US 5,840,800) (item 11, page 7 of the 3/28/2006 office action).

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Applicant traverses these rejections and respectfully submits the presently amended claims are non-obvious over Hiroshi in view of Gee, Nothnagel, or Joffre for the reasons detailed below.

Claim 1 has been amended to incorporate all the limitations of the main composition claim allowed in the parent application, now US Patent No 6,737,473.

Applicant respectfully submits that the combination of Hiroshi with either Gee or Nothnagel does not establish a prima facie case of obviousness of claim 1 because there is no motivation, teaching, or suggestion in either reference to combine these references to arrive at the present claim. Hiroshi fails to teach processes for preparing emulsions having a solid content greater than 75 wt %, nor processes where an elastomeric polymer is emulsified without using a solvent. Hiroshi actually "teaches away" from the process of claim 1 because Hiroshi emphasizes the mixture of solvents with the polymer to be emulsified (see Table in Working Examples 1-3 on page 14 and [0038]. Furthermore, Hiroshi does not teach emulsions having a solids content greater than 75wt%. Hiroshi "teaches away from" emulsions having such a solids content in [0042] and in the Table of the Working Examples 1-3 because on the amounts of water added. Hiroshi describes in [0042] "the use of 100 to 1000 parts of water (per 100 parts of saturated hydrocarbon type polymer A) is even more desirable."

The Examiner relies on Gee or Nothnagel as teaching a pre-mix method to prepare emulsions by adding water in incremental amounts. The Examiner asserts in item 7 on page 6 of the 03/28/2006 office action;

...one having ordinary skill in the art would have found it obvious to modify Hiroshi's preparation of water dispersible and cross-linkable compositions by using a pre-mix method as taught by Gee or Nothnagel.

However, there is no specific teaching or motivation in either Gee or Nothnagel to apply such pre-mix methods to a process for preparing water continuous emulsions of an elastomeric polymer having a viscosity of 0.5 to 1,000,000 KPa-s and a glass transition temperature up to 50°C and essentially without the use of solvents, as per the present claim 1. Nothnagel utilizes a solvent based premix, which again "teaches away" from the

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process of claim 1 which uses an essentially solvent free premix. Gee teaches emulsions of high viscosity polysiloxanes (with only examples of polysiloxane fluids, not elastomeric polymers having a viscosity of 0.5 to 1,000,000 KPa-s and a glass transition temperature up to 50°C and essentially without the use of solvents).

Conversely, there is no teaching, suggestion or motivation in Hiroshi to use the pre-mix methods of Gee or Nothnagel to prepare water continuous emulsions of an elastomeric polymer having a viscosity of 0.5 to 1,000,000 KPa-s, a glass transition temperature up to 50°C, and essentially without the use of solvents (per present claim 1).

Applicant further submits that claims 2-14 are non-obvious over Hiroshi in view of Gee, Nothnagel, or Joffe as they are dependent on claim 1, which is patentable for the reasons cited above.

Applicant respectfully submits that the combination of Hiroshi with either Gee or Nothnagel does not establish a prima facie case of obviousness of claim 15.

Claim 15 specifies that;

water is added to the premix in incremental portions, whereby each incremental portion comprises less than 8 weight % of the premix and each incremental portion of water is added successively to the previous after the dispersion of the previous incremental portion of water, wherein sufficient incremental portions of water are added to form the water-continuous emulsion of the elastomeric polymer.

The Examiner states in item 8 of the 03/28/2006 office action that Gee teaches the addition of water in incremental amounts. (Examples 2-5 on pages 7-8 of Gee cited) However, Gee fails to teach or suggest incremental portions comprising less than 8 weight % of the premix. Furthermore, Gee fails to teach or suggest such incremental portions for premixes containing an elastomeric polymer having a viscosity of 0.5 to 1,000,000 KPa-s, a glass transition temperature up to 50°C .

Further evidence of the non-obviousness of claim 15 is supported by the Examples. In Example 2, runs 6-9 (see Table 2), experimental results show the benefits of incremental water additions to be 8 weight percent or less of the premix. Comparatively, when the amount of water added was 16 weight percent of the premix, the resulting emulsion had a bi-modal distribution.

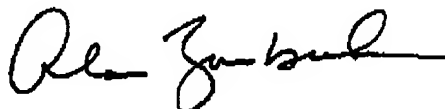
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The present response is being submitted within the six-month statutory period for response to the outstanding Office Action. Applicant authorizes the USPTO to charge deposit account 04-1520 for a one month extension of time along with any other fees that should be necessary to maintain the pendency of the application.

In view of the above, it is respectfully submitted that the claims are in condition for allowance. Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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